

St. Catherine University

SOPHIA

Master of Social Work Clinical Research Papers

School of Social Work

5-2016

The Effectiveness of Cognitive Processing Therapy (CPT) in the Treatment of Posttraumatic Stress Disorder (PTSD) Among Veterans Who Have Experienced Military Sexual Trauma

Nicole Humble

St. Catherine University, nicole.m.humble@gmail.com

Follow this and additional works at: https://sophia.stkate.edu/msw_papers



Part of the [Social Work Commons](#)

Recommended Citation

Humble, Nicole. (2016). The Effectiveness of Cognitive Processing Therapy (CPT) in the Treatment of Posttraumatic Stress Disorder (PTSD) Among Veterans Who Have Experienced Military Sexual Trauma. Retrieved from Sophia, the St. Catherine University repository website: https://sophia.stkate.edu/msw_papers/601

This Clinical research paper is brought to you for free and open access by the School of Social Work at SOPHIA. It has been accepted for inclusion in Master of Social Work Clinical Research Papers by an authorized administrator of SOPHIA. For more information, please contact amshaw@stkate.edu.

The Effectiveness of Cognitive Processing Therapy (CPT) in the Treatment of
Posttraumatic Stress Disorder (PTSD) Among Veterans Who Have Experienced
Military Sexual Trauma

By

Nicole Humble, B.A., MSW, LGSW

MSW Clinical Research Paper

Presented to Faculty of the
School of Social Work
St. Catherine University and the University of St. Thomas
St. Paul, Minnesota

Master of Social Work

Committee Members

Nesmith, Andrea, PhD., (Chair)
Dawson, Christine, LGSW, LADC
McCard, Caroline, LICSW, ACSW

The Clinical Research Project is a graduation requirement for MSW students at St. Catherine University/University of St. Thomas School of Social Work in St. Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present the findings of the study. This project is neither a Master's thesis nor a dissertation.

Table of Contents

Acknowledgments	3
Abstract	4
Introduction.....	5
History of Women in The Military	5
Definitions of Sexual Harassment and Sexual Assault.....	7
Military Life: Factors That Influence MST	8
Being a Woman	9
Deployment.....	9
Reporting Trauma: Two Ways to Report, Fears of Reporting	10
Different Therapeutic Treatments Used	11
Cognitive Processing Therapy	11
Prolonged Exposure.....	11
Cognitive Behavioral Therapy.....	12
Eye Movement Desensitization and Reprocessing (EMDR).....	12
Phase Model.....	13
Taking Charge: A Therapeutic Self-Defense Program.....	13
Conceptual Frame Work.....	14
Definition of Risk and Resiliency.....	14
Relation To The Topic	15
How Resiliency Can Be Used With PTSD	15
Methods	16
Inclusion /Exclusion Criteria	16
Search Strategy	16
Table 1. Procedures For Assessing Quality	17
Table 2. Sample Data Collection Tool.....	18
Figure 1. Flow diagram of article selection for literature review	19
Table 3. Scoring matrix of selected articles by theme	20
Effectiveness of CPT among veterans with a history of MST (7 studies).....	22
Effectiveness of CPT among veterans with military-related PTSD (not MST specific).....	24
Sustainability of Gains from Treatment (2 studies).....	26
Cost-benefit of CPT treatment (1 study).....	27
Discussion.....	27
Implications	27
Conclusion	32

Acknowledgments

I would like to thank Ande my chairperson for having patience and understanding. Thank you for helping me understand the process, and actually helping me to like research a little more. Christine, and Caroline thank you so much for reading my paper and making corrections. Thank you for taking the time out of your busy schedules to help me. I appreciate you ladies very much!

Thank you again!

Abstract

The Effectiveness of Cognitive Processing Therapy (CPT) in the Treatment of Posttraumatic Stress Disorder (PTSD) Among Veterans Who Have Experienced Military Sexual Trauma
By Nicole Humble, B.A., MSW, LGSW

Research Chair: Andrea Nesmith Ph.D.

Committee Members Dawson, Christine, LGSW, LADC, McCard, Caroline, LICSW, ACSW

Military sexual trauma is a growing problem in the United States military. With the integration of women in the infantry units in all military branches it is even more of a concern. Military sexual trauma though does not happen to only women. The purpose of this research project was to take a known evidence based therapy used by the Veterans Health Administration Department of Veterans Affairs, and see if it is effective in the treatment of post traumatic stress disorder in military sexual trauma victims. The VA uses many evidence-based therapies from Prolonged Exposure, cognitive behavior therapy, EMDR, and also the use of medications when further assistance is needed. The literature review is the first of its kind to study the effectiveness of cognitive processing therapy (CPT), posttraumatic stress disorder (PTSD), and military sexual trauma (MST) together. The question asked was “is cognitive processing therapy more effective when treating Post Traumatic Stress Disorder in Military Sexual Trauma victims?”

The findings show that CPT is effective in the treatment of PTSD in MST victims, and that it is also effective in reducing depressive symptoms, and lowering PTSD symptoms in those who had not experienced MST, but military related PTSD.

Introduction

The United States military has been around for roughly 241 years starting with the Army, and since then there has been military sexual trauma (MST). There is increasing awareness of the victimization that happens within the military and a growing number of victims requesting mental health treatment for sexual assaults within the Veterans Affairs Medical Center (Voelkel, Pukay-Martin, Walter, & Chard, 2015). This research will go over the history of women in the military, which women today make up 14.5% of the 1.4 million active duty components of the military personnel, and 18% of the 850,000 reserves or the part-time members of the National Guard and Reserve Force. Today, women are enlisting at a far greater numbers compared to the 1950's, which was just 2% (Boyd, Bradshaw, & Robinson, 2011).

Researchers have stated that 20-40% of female veterans have reported military sexual trauma, and that during women's active duty military service 21-25% reported sexual assault, and 24-60% reported sexual harassment (Kelly, Skelton, Patel & Bradely, 2011). Military sexual trauma does not only affect women, but men as well. Men reported military sexual trauma 1%-3% of the time (Hoyt, Rielage, & Williams, 2012). However, the numbers could be much higher due to the lack of reporting among the men (Hoyt, Rielage, & Williams, 2012).

Lastly, the researcher will talk about military life, including deployments, the factors that influence military sexual trauma, and the different ways to report military sexual trauma.

History of Women in The Military

Women have been serving in the military for over a hundred years, which potentially means military sexual trauma has been an issue and a concern for women for over a hundred years. Women today make up 14.5% of the 1.4 million active duty components of the military personnel, and 18% of the 850,000 reserves or the part-time members of the National Guard and

Reserve Force. With the women in the military enlisting at far greater numbers than in the 1950's, which was just 2% (Boyd, Bradshaw, & Robinson, 2011). Military sexual trauma is impacting many lives, and is a real problem. There are many cases that have been reported, but many go unreported for fear of judgment, reappraisal, and more victimization.

With the wars in Afghanistan and Iraq there was no obvious "front line" to fight on unlike like the wars in the past. Women can be convoy transportation operators where the women are either drivers, or passengers in the vehicle on the convoys that bring supplies to the forward operating bases (FOB) (Street, Voght, & Dutra, 2009). Women have also been attached to combat units serving and fighting along side their male counterparts during the wars in Iraq and Afghanistan. For example, in the role of a Lioness, teams of females are with a male military unit in order to search the women. Their job is to ensure the ladies who are entering or exiting the city do not have any bombs or weapons on them. They are attached to all male units while in these countries because men cannot search local women.

Even though women are supposedly breaking through the glass ceiling in the military and making the units and military occupational specialties more equal, this is a concern since the number of sexual trauma and harassment victims keeps going up. The numbers of sexual assaults reported in 2002 were 1,007 victims, in 2003 the numbers jumped to 1,113 victims, and in 2011 the numbers soared to 3,192 (Boyd, Bradshaw, & Robinson, 2013; Williams & Bernstein, 2011). With the integration of the females into the all-male units, those numbers may in fact go up. From the year 2012 to 2013 there was a 53% increase in victim reports of sexual assault (DOD annual report on Sexual Assault). In the year 2014 6,131 reports of sexual assault were sustained. This figure represents an increase of 11% over fiscal year 2013 numbers (DOD annual report on Sexual Assault). There is a potential for these numbers to soar even higher, and

clinicians need to be prepared. It has been said “the prevalence of and negative consequences of MST in both returning military personnel and veterans, research related to clinical treatment of MST-related PTSD is critical” (Holliday et al., 2014, p. 1077).

These numbers and statistics are concerning on many levels because these are men and women who have served their country and worked alongside one another. They were sexually assaulted or harassed so horribly by the people they worked with and were supposed to trust with their life, it caused the person to develop PTSD.

Definitions of Sexual Harassment and Sexual Assault

Katz et al. (2007) reported that a person who has been sexually traumatized is four times more likely to develop PTSD than a person who has been exposed to combat stress. In general rape victims are the biggest solo group to suffer with PTSD (Katz, Bloor, Cojucar, Draper, 2007). Traumatic events can be defined as “events that involve actual or threatened death, serious injury, or threat to the physical integrity of self or others.” (Landes, Garovoy, & Burkman, 2013, p. 523). The Department of Defense defined sexual assault as “the alleged offenses of rape, nonconsensual sodomy, unwanted sexual contact, and attempts to commit these offenses” (Williams, & Bernstein, 2011, p. 138). In addition, being sexually assaulted by your fellow military comrades produces posttraumatic stress disorder (PTSD), which can be worse than being assaulted by strangers (Williams, & Bernstein, 2011). The possible reason for this is due to the fact that a victim may have to continue to work with the perpetrator if the attack or harassment goes unreported, or they are not punished if it is reported.

If a person were to see someone for counseling while still serving in the military, or as a veteran and has emotional issues it is considered “weak” and a person should “tough it out” instead of getting help (Williams, & Bernstein, 2011). Twenty-two veterans a day commit

suicide because of traumatic or emotional issues that they cannot face alone (Lee, 2014). Those numbers are too high and need to be lowered, but even with counseling a person who is enrolled in the Veterans Health system may wait months for an appointment. The Veterans Affairs system is working on the issues, but that will take time.

Military sexual trauma is an experience not a disorder and can be defined by the Department of Veteran Affairs as “sexual harassment that is threatening in character or physical assault of sexual nature that occurred while the victim was in the military, regardless of geographic location of the trauma, gender of the victim, or the relationship of the perpetrator” (Holliday, Link-Malcolm, Morris, & Suris, 2014, p. 1077). Military sexual trauma is also characterized as the “traumatic event of sexual assault in the military which can contribute to the development of posttraumatic stress disorder (PTSD) for the survivor” (Northcut, & Kienow, 2014, p. 248).

Military Life: Factors That Influence MST

Military life consists of the time from first enlistment to when a person is discharged from the military. Basic training in the military, and the combat training is to train a person for combat situations; how to be a Soldier, Airmen, Marine, or a Seaman and the history behind the branches. Basic training also reinforces the societal perception that men are supposed to be dominant, successful, authoritative, and manly. “Male soldiers are socialized that achieving sexual intercourse is a sign that they have met the standards of the military’s masculine warrior culture” (Williams, & Bernstein, 2011, p. 140.). On the other hand, women seem to have a cultural conflict because many women are groomed as children to be feminine and are supposed to be attractive and girly, but the military trains them like the men and they are transformed into being more masculine and warrior-like, which is not following the cultural norm. Before the

military you are an individual. During the military you are no longer an individual, but are supposed to be like your comrades. Individuality is trained out of you.

After men and women have completed basic training, combat training, and military specialty school, they then go to the unit they are assigned to. They live amongst one another like a dorm where men and women live on the same floors and spend a lot of the time side by side. Like college, these men and women are away from home for possibly the first time and may engage in irresponsible and risky behaviors.

Being a Woman

Experiences with military sexual trauma are alarmingly widespread. It has been estimated that 20% of female veterans seeking treatment within the VA system have been sexually assaulted while serving in the military, and another 20% have been exposed to recurring threatening sexual harassment (Ferdinand, Kelly, Skelton, Stephens, & Bradley, 2011). According to the VA medical center, “approximately one in every four women reported experiencing sexual trauma while on active duty” (Kelly, Skelton, Patel, & Bradley, 2011, p. 457).

Deployment

Women and men in war face many of the same stressors but also face many different stressors. Both men and women face deployment related stressors such as mission ready stressors, combat experience, and hazardous living and working conditions. However, many more women face stressors related to concerns back home, sexual harassment and sexual assault. Men may also face those same stressors, even though there are far fewer men who have experienced sexual trauma and sexual assault than women. The United Nations adopted the “Declaration of Violence Against Women” which describes violence against women as ‘any act

of gender-based violence that results in, or is likely to result in, physical, sexual, or psychological harm or suffering to women including threats of such acts, coercion or arbitrary deprivations of liberty, whether occurring in public or private life” (Mattocks, Haskell, Krebs, Justice, Yano, & Brandt, 2012, p. 538).

Women deployed to a combat zone were more likely to experience emotional distress in reaction to combat related trauma than men. However, when a woman maintains frequent contact with friends and family at home, and feels support from the leadership during the deployment it may improve the women’s ability to cope with the deployment-related stressors (Mattocks et al., 2012). According to Mattocks et al. (2012) male veterans who served in Iraq and Afghanistan reported sexual trauma at 0.7% when screened, and females reported being sexual victims at 15.1% when also screened. The screening process (includes a question that asks the person if they have ever been exposed to sexual harassment or sexual trauma.

Reporting Trauma: Two Ways to Report, Fears of Reporting

There are two ways to report a sexual assault; one is a restricted report, and the other is unrestricted. If victim(s) wants to get medical attention and counseling then they would file a restricted report and remain anonymous. However, if they want to seek punishment for their attacker then they need to file an unrestricted report and no longer remain anonymous. The unrestricted way of reporting makes it more difficult and almost shameful to the victim reporting (Williams & Bernstein, 2011). Many victims of the harassment or assault feel that they will be reprimanded, accused of lying, and or labeled a troublemaker so there are many cases that do not get reported.

Different Therapeutic Treatments Used

Research has identified strong associations between MST and psychiatric conditions, most commonly PTSD. MST victims had a nine times higher risk for PTSD compared to those without a history of sexual trauma (Suris, Link-Malcolm, Chard, Ahn, & North, 2013). Also “among female veterans, distress associated with sexual trauma has also been found to be nearly 4 times more prominent than duty-related distress in the eventual development of PTSD” (David, Simpson, & Cotton, 2006, p. 556). It is important to find what works because having experienced MST and having PTSD due to MST has been shown to have numerous negative health outcomes like depression, substance use, cardiovascular diseases, eating disorders, and socioeconomic difficulties (Holliday et al., 2014).

Cognitive Processing Therapy

One treatment that has been used to help victims of military sexual trauma is Cognitive processing therapy (CPT), which is an evidence based treatment and a form of cognitive behavioral therapy that “helps patients recognize cognitive “stuck points”, which are negative and distorted cognitions related to the patient’s trauma(s)” (Holliday et al., 2014, p. 1077). With this therapy technique the therapist teaches the patient how to challenge negative thinking. CPT was found to be more effective at reducing the general negative thinking about oneself, the world, and also significantly reduced the self-blame of the participants (Holliday et al., 2014).

Prolonged Exposure

Prolonged Exposure (PE) is another treatment used by the Veterans Affairs hospital and has been demonstrated to be successful in the treatment of PTSD in MST and combat exposure. Prolonged exposure (PE) has three main therapeutic components. The first one is psycho-education, the second is en vivo exposure, and the third is imaginal exposure (Rauch, DeFeaver,

Favorite, Duroe, Garrity, Martis & Liberzon, 2009). The findings for prolonged exposure were “reductions in large across all three symptom clusters” (Rauch et al., 2009, p. 62). However, there are many clinicians that harbor concerns with the effectiveness and the use of PE (Rauch et al., 2009, p. 63).

Cognitive Behavioral Therapy

Cognitive Behavioral Therapy (CBT) is typically integrated in all forms of therapy and treatment methods used. It is the most common type of treatment. It has been found to be effective in treating PTSD-related to MST in both men and women (Hoyt, Rielage, & Williams, 2012).

Eye Movement Desensitization and Reprocessing (EMDR)

Eye Movement Desensitization and Reprocessing (EMDR) has eight phases of treatment which include; treatment planning, preparation, assessment, desensitization, installation, body scan, closure, and reevaluation. “Therapist directed lateral eye movements are the most commonly used external stimulus but a variety of other stimuli including hand-tapping and audio stimulation are often used” (EMDR Institute, 2015). The comprehensive treatment of EMDR targets three pronged protocols. The first one is past memories, the second is present issues and disturbances, and the third is future actions. The first goal of EMDR therapy is “to process completely the experiences that are causing problems, and to include new ones that are needed for full health. The second goal is to leave you with the emotions, understanding, and perspectives that will lead to healthy and useful behaviors and interactions” (EMDRIA EMDR International Association, 2014).

Phase Model

Phase model is another form of therapy and is a three-phase model. The first phase is stabilization, which focuses on any self-injurious or suicidal behaviors and also developing emotion and self-regulation skills. The second phase of the model focuses on the trauma treatment, which involves recalling and becoming the master of the person's traumatic memories. Lastly, the third phase of the model focuses on reconnection, the purpose of which is to reestablish the connections in interpersonal relationships and be a part of meaningful work and recreational activities. Overall, the outcomes of this treatment method were positive and the participants in the study were able to live a more fulfilling and happy life (Ferdinand et al., 2011). However, this study was done on only one participant and more research needs to be done on this model in order to prove or disprove its effectiveness.

Taking Charge: A Therapeutic Self-Defense Program

Currently there is a pilot project aimed at training female veterans with PTSD due to military sexual trauma in defense and personal safety. The research indicates that the "personal safety and/or self defense (PS/SD) training effectively empowers women to cope with the threat of physical and sexual violence by providing a strong sense of mastery and personal control over their own safety and well-being" (David, Simpson, & Cotton, 2006, p. 556). The pilot program had such positive results it led to the development of the Taking Charge program, which is a therapeutic self-defense program. The outcome of this program was that women felt less fearful about being assaulted, had a less feelings of vulnerability and more confidence which in turn decreased the participants depression, PTSD avoidance and hyperarousal symptoms, and they were able to be more assertive, set boundaries, and had more willingness to participate in community activities (David, Simpson, & Cotton, 2006).

The purpose of this research is to explore the spectrum of available treatment options for military sexual trauma, including those that are conventional and those that are more current and innovative or less conventional. This paper will specifically focus on the effectiveness of Cognitive Processing Therapy (CPT) in treating PTSD in MST victims.

Conceptual Frame Work

The purpose of the conceptual framework will guide the reader to understand the definition, the design of the study, and how the framework is used. This researcher chose risk and resilience theory along with a strengths-based approach. Risk and resilience theory and strengths based theory can be used interchangeably. One way resiliency theory can be used is by taking a “strengths-based approach to understanding child and adolescent development and informing intervention design” (Zimmerman, 2013, p. 1). If a child or adult has support when something traumatic happens to them, then they are more likely to be able to overcome or work through that traumatic incident and live a “normal” life. What this means when something traumatic or victimizing happens to a child, when they are an adult they will also not traumatize or victimize others.

Definition of Risk and Resiliency

Risk and resiliency can best be explained as a psychological process developed in response to an intense life stressor that helps you to function normally after the fact (Zimmerman, 2013). There are also other definitions that state it is the “absence of adverse symptoms following trauma, sustained performance during an intense physical or psychological challenge or maintenance of a positive outlook despite having experienced significant adversity” (Ballenger-Browning, & Johnson, 2010, p. 1). To clarify, when a person experiences a negative trauma and they have minimal negative outcomes, they have high resiliency. When a person

who suffers a traumatic incident has negative outcomes, they do not have a high resiliency, or have no resiliency at all.

Relation To The Topic

There are many risk factors that can be traumatic for Active Duty, National Guard, Reserve, and Veterans. For example; frequent relocation, deployments, exposure to combat, military sexual trauma, sexual harassment, and family issues. It is believed that the reason many military members and veterans do not develop stress-related psychopathology is because they developed resilience not only before the military, but also through training in the military (Ballenger-Browning, & Johnson, 2010). However, if military personnel do not have a high resiliency factor it does not mean they are doomed to live with Posttraumatic Stress Disorder for the rest of their lives. Cognitive processing therapy is one possible way to help veterans who have experience military sexual trauma. They become more resilient by learning skills that they can use not only to reduce the symptoms of PTSD, but also make it easier to deal with day-to-day tasks (U.S. department of veterans affairs, 2015).

Risk and resiliency theory research has been used to study the resiliency in children, also military personnel and their families with regards to relocation, military deployments, field training exercises, the affects of military sexual trauma, and other risk factors. By teaching military personnel resiliency factors it can protect them against PTSD and other traumatic stressors.

How Resiliency Can Be Used With PTSD

There are many tools a person can be taught in regards to resiliency. A few that can be useful are; being physically active; if they are spiritual or religious; have a positive outlook on life and future, along with being optimistic. Also having a social support group whether it be a

therapy group, family, friends, or a mixture can be useful with building resiliency and help a person to cope with life stressors or any major traumas a person may face in life.

Methods

The method used was a systematic review. The researcher analyzed quantitative journals and found answers to the specific question that were asked. The question asked was “is cognitive processing therapy more effective when treating Post Traumatic Stress Disorder in Military Sexual Trauma victims?”

Inclusion /Exclusion Criteria

The researcher used studies that analyzed both men and women individually and as a group in the same studies in the journal article(s). When searching for articles the researcher found that men did not report as often, so not many published articles on males alone were used, but it was important that both genders were included in the research. All journals before the year 2000 were rejected. There was not a specific sample size the researcher was looking for. Exclusion criterion was something other than Post Traumatic Stress Disorder due to other types of traumas not from Military Sexual Trauma. For example, trauma from combat or car accident(s), they also had to be off active duty. However, they could still be a part of the Reserves or National Guard, and had experienced sexual trauma at other times in their lives.

Search Strategy

The researcher went to the Universities of St. Thomas and St. Catherine website utilizing the library and searched under the social work databases: psych info, PILOTS, SocINDEX, EBSCO, Social work abstracts, and Summons.

The search terms were used both individually and in conjunction with one another

- Cognitive processing therapy (CPT)

- Military sexual trauma (MST)
- Military sexual assault (MSA)
- Post traumatic stress disorder (PTSD)
- I will look from 2000- current

For the methods quality scoring the researcher chose sample size, study design, repeated measures and sample characteristics, which were monitored over a follow-up period. The researcher used a 3-point scale assessing four-study characteristics and added up the scores. Sample size was chosen because there were large differences between studies (e.g., 11 versus 481). Study design was chosen because not all studies were randomized control trials, the “golden standard.” Repeated measures were chosen because the studies showed strength in this category (Measures >2 time points). Sample Characteristics were chosen because not all articles focused specifically on the effectiveness of cognitive processing therapy in the treatment of posttraumatic stress disorder in military sexual trauma in victims, but were able to also focus on the treatment of military related PTSD in veterans.

Table 1. Procedures For Assessing Quality

Method	Quality		
	1 (poor)	2 (moderate)	3 (high)
Sample size	< 100	101-200	> 201
Study Design	Other	Cohort (Follow a group forward through time)	Randomized controlled trial
Repeated measures	Point-in-time (cross-sectional)	Pre-post tests	Measures >2 time points
Sample Characteristics	Veteran	NA	Veteran +MST

The table below is used for ensuring the journal articles chosen are best fit for the research present. The table will be a visual tool to aide in the research.

Table 2. Sample Data Collection Tool

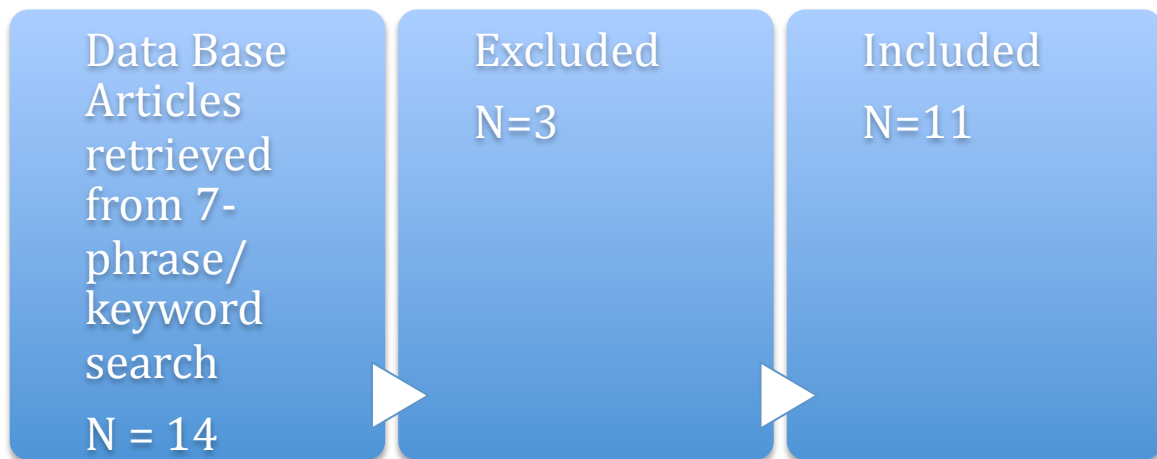
Author/ date	Sample Size	Sampling Strategy	Repeated Measures	Follow up period	Methods Score	Findings

The researcher described and tracked each stage explaining the reasons why she choose to reject or keep the criteria, which included; gender, the size of the samples, if a participant had posttraumatic stress disorder having experienced military sexual trauma, if the participant had posttraumatic stress disorder without experiencing military sexual trauma, or if the person experienced military sexual trauma without posttraumatic stress disorder. The researcher also looked at the different types of therapeutic techniques.

The researcher started out with 14 articles that met the search criteria for the literature review. After careful review and completing the scoring matrix, 3 articles were excluded. Not all the articles focused on the specifics of CPT in the treatment of PTSD in MST victims, but were still used due to CPT being used on veterans with military related PTSD. One of the articles that was rejected did not focus on treatment at all, but the initiation process, and drop out rate of the participants involved. Another article was rejected because it focused on race treatment termination and outcomes in PTSD treatment, and veterans were not the participants that were researched. The last article was excluded was because it was a qualitative study describing how to best implement a model that serves veterans who have MST related PTSD.

Because of its focus on programming implementation, but not generalizable research, it was not appropriate for this literature review.

Figure 1. Flow diagram of article selection for literature review



Findings

The table below is the outcome of the scoring matrix. The researcher used the matrix from Table 1 to find the articles that match the beginning hypothesis, which was; “is Cognitive Processing Therapy (CPT) effective in the treatment of posttraumatic stress disorder (PTSD) among veterans who have experienced military sexual trauma?”

Table 3. Scoring matrix of selected articles by theme

Theme 1. Effectiveness of CPT among veterans with a history of MST (7)

Author(s), Year	Sample size	Study Design/type of study	Repeated Measures	Sample Characteristics	Score
Walter, L., et al., (2014)	110 (2)	Cohort (following forward through time) (2)	Pre-post test (2)	Veterans + MST (3)	9
Holliday, R., et al., (2015)	112 (2)	Randomized, controlled trial (3)	Pre-post test (2)	Veterans + MST (3)	10
Tiet, Q., et al., (2015)	574 (3)	Cohort (following forward through time) (2)	Pre-post test (2)	Veterans + MST (3)	10
Suris, A., et al., (2013)	86 (1)	Randomized, controlled trial (3)	Measures >2 time points (3)	Veterans + MST (2)	9
Voelkel, E., et al., (2015)	481 (3)	Cohort (following forward through time) (2)	Measures >2 time points (3)	Veteran + MST (3)	11
Holliday, R., et al., (2014)	45 (1)	Randomized controlled trial (3)	Measures > 2 time points (3)	Veterans +MST (3)	10
Mullen, K., et al., (2014)	11 (1)	Randomized controlled trial (2)	Measures >2 time points (3)	Veterans + MST (3)	9

Theme 2. Effectiveness of CPT among veterans with military-related PTSD (not MST specific) (5)

Author(s), Year	Sample size	Study Design/type of study	Repeated Measures	Sample Characteristics	Score
Monson, C., et al., (2006)	60 (1)	Randomized, controlled trial (3)	Pre-Post test (2)	Veterans (2)	8
Meyers, L., et al., (2013)	70 (1)	Cohort (following forward through time) (2)	Pre-post (2)	Veterans (2)	7
Schnurr, P., et al., (2015)	284 (2)	Randomized, controlled trial (3)	Measures > 2 time points (3)	Veterans (1)	9
Zappert, L., et al., (2008)	18 (1)	Cohort (following forward through time) (2)	Pre-post (2)	Veterans (2)	7
Schumm, J., et al., (2015)	195 (2)	Cohort (following forward through time) (2)	Measures >2 time points (3)	Veterans (1)	9

Theme 3. Sustainability of gains of treatment (3)

Author(s), Year	Sample size	Study Design/type of study	Repeated Measures	Sample Characteristics	Score
Meyers, L., et al., (2013)	70 (1)	Cohort (following forward through time) (2)	Pre-post test (2)	Veterans (2)	7
Mullen, K., et al., (2014)	11 (1)	Randomized controlled trial (2)	Measures >2 time points (3)	Veterans + MST (3)	9
Holliday, R., et al., (2014)	45 (1)	Randomized controlled trial (3)	Measures > 2 time points (3)	Veteran +MST (3)	10

Theme 4. Cost-benefit of CPT (1)

Author(s), Year	Sample size	Study Design/type of study	Repeated Measures	Sample Characteristics	Score
-----------------	-------------	----------------------------	-------------------	------------------------	-------

Meyers, L., et al., (2013)	70 (1)	Cohort (following forward through time) (2)	Pre-post test (2)	Veterans (2)	7
-------------------------------	--------	---	-------------------	--------------	---

CPT is a therapy that the Veterans Health Administration uses in the treatment of PTSD.

A practitioner using this form of therapy helps patients work through their cognitive “stuck points,” which may impact their view of themselves, others, and the world (Holiday, Williams, Bird, Mullen, & Suris, 2015). The researcher found that CPT shows positive results for veterans who undergo treatment (Holliday, Link-Malcolm, Morris, & Suris, 2014). Existing literature also suggests that CPT is effective and sustainable in treating PTSD among MST victims, although there is very little research that focuses specifically on this.

Prevailing themes presented throughout the research included the following:

- Effectiveness of CPT among veterans with a history of MST
- Effectiveness of CPT among veterans with military-related PTSD (not MST specific)
- Sustainability of gains from treatment
- Cost-benefit of CPT treatment

Effectiveness of CPT among veterans with a history of MST (7 studies)

The goal of this research paper was to determine if CPT is effective in the treatment of PTSD among veterans with a history of MST. The researcher found that this was overwhelmingly true in the review of the existing literature, with the caveat that many studies had a small sample size. This theme had the most studies to provide evidence on the effectiveness of CPT in the treatment of PTSD in MST victims. The Voelkel, E., et al., (2015) was the highest rated article in this section and overall with a score of 11 out of the highest possible score being 12. All articles in the scoring matrix had a score of 9 or higher.

Walter, Buckley, Simpson, and Chard (2013) found that CPT led to significant reductions in the pre-treatment vs. post-treatment scores of clinician-rated PTSD, self-reported PTSD symptoms, and depressive symptoms in a cohort of 110 female veterans with a history of MST. Importantly, they found this to be true regardless of whether a participant had or did not have a history of childhood sexual abuse (i.e., MST alone versus MST and childhood sexual abuse).

In a randomized controlled trial involving 45 veterans with MST-related PTSD, Holliday, Williams, Bird, Mullen, and Suris, (2015) found that participants treated with CPT showed improvements in several domains including; social functioning, role-emotional, role-physical, general health, and physical functioning. They also found that in regards to physical functioning, CPT led to better outcomes as compared to Present-Centered Therapy.

Tiet, Leyva, Blau, Turchik, and Rosen (2014) studied treatment outcomes in a cohort of 574 veterans recruited from seven programs across the U.S. (including domiciliary, residential rehab, one-day hospital, and women's treatment rehab programs). All participants in the study received individual CPT, but some also received group CPT, prolonged exposure therapy, and/or eye-movement desensitization and reprocessing therapy. The authors found that being a veteran with a history of military sexual assault did not predict worse CPT treatment outcomes between post-discharge assessment (baseline) and 4-month follow-up assessment, as compared to being a veteran without a history of military sexual assault. Likewise, the interaction of being a woman and having a history of military sexual assault did not predict worse CPT treatment outcomes. These findings went against the author's original hypotheses that a history of military sexual assault adversely affects treatment outcomes.

In a randomized controlled trial involving 86 veterans with MST-related PTSD, Suris, Link-Malcolm, Chard, Ahn, and North (2013) tested the effects of CPT treatment versus Present-

Centered Therapy as the control treatment. The authors' original hypothesis that CPT in the intervention group would result in less severe outcomes as compared to Present-Centered Therapy in the control group was not supported. However, the treatment outcomes of CPT were similar to Present-Centered Therapy. Participants in both treatment groups experienced decreases in clinician-reported posttraumatic symptoms, self-reported posttraumatic symptoms, and depressive symptoms.

Voelkel, Pukay-Martin, Walter, and Chard (2015) used archival data from a residential treatment program to study CPT among veterans with and without a history of MST. Clinician-rated PTSD, self-reported PTSD symptoms, and depressive symptoms decreased over time for both groups. There were some differences in treatment outcomes by sex. Women who participated in the study demonstrated a bigger reduction over time in their clinician-rated PTSD scores between pre-treatment and post-treatment, as compared to men. Men with a history of MST received higher scores for clinician-rated PTSD than the men without MST.

Holliday, Link-Malcolm, Morris, and Suris (2014) found that veterans with MST-related PTSD who were treated with CPT significantly reduced the negative cognitions one had about themselves, and the world in general versus those that went through the Present-Centered Therapy treatment.

Mullen, Holliday, Morris, Raja, and Suris (2014) found that CPT treatment reduced clinician-rated PTSD and self-reported PTSD symptoms between pre-treatment and post-treatment in a small group of 11 male veterans with MST-related PTSD.

Effectiveness of CPT among veterans with military-related PTSD (not MST specific) (5 studies)

The second theme the researcher found was that CPT is not only effective in reducing

PTSD symptoms and depressive symptoms among veterans with a history of MST, but also for veterans with military-related PTSD that was not MST specific. The researcher was able to find 5 research studies that were able to show evidence in the effectiveness of CPT in the treatment of PTSD among veterans with non-MST related PTSD. Two of these studies scored a 9, while another two studies had the lowest score of 7. The studies were not as highly rated because they did not fit the exact question being asked.

Monson, Schnurr, Resick, Friedman, Young-Xu, and Stevens (2006) compared mental health outcomes for a group of veterans who were actively treated with CPT to veterans in a waitlisted control group (N=60). The veteran participants in the study did not have MST-related PTSD, but they did have PTSD due to military-related stressors. The authors found that the CPT group experienced significant reductions between pre-treatment and post-treatment for clinician-related PTSD, self-reported PTSD, and other co-morbid conditions, including depression and general anxiety as compared to the wait-listed control group.

Meyers, Strom, Leskela, Thuras, Kehle-Forbes, and Curry (2013) compared the effects of CPT treatment in a cohort of 70 veterans with PTSD. They found that veterans who were treated with CPT or Prolonged Exposure Therapy experienced significant reductions in the severity of PTSD and depressive symptoms in the year after treatment, as compared to the year before treatment. Neither treatment was more effective than the other.

In a randomized controlled trial involving 284 veterans with PTSD due to a traumatic military-related event Schnurr, Chard, Ruzek, Chow, and Shih (2015) found that younger women that undergo CPT treatment had greater improvements in their PTSD symptoms than those who were treated with Prolonged Exposure Therapy.

In a cohort of 18 veterans with PTSD, Zappert and Westrup (2008) found that 15 of the

18 experienced significant reductions in their PTSD symptoms as a result of CPT treatment.

Schumm, Dickstein, Walter, and Owens (2015) found that CPT treatment decreased PTSD symptoms and depressive symptoms in a sample of 195 veterans between pre-treatment and post-treatment. They investigated the underlying mechanisms of this change, which included the finding that change in trauma-related cognitions precedes change in PTSD symptoms and the finding that a reduction in depression is correlated to a reduction in PTSD.

Sustainability of Gains from Treatment (3 studies)

The former two themes emphasized the efficacy of CPT among veterans. Sustainability is another important theme, which helps gauge whether mental health gains from CPT treatment can be sustained over time. Most studies did not show sustainability of treatment gains, since they measured changes in PTSD or depressive symptoms between pre-treatment (baseline) and immediately post-treatment. However, a total of three studies showed that CPT can lead to sustained outcomes through 6 months follow-up or greater. The scores of these studies were 10, 9, and 7. The highest scored was Holliday, R., et al., (2014) with the score of 10. These studies were able to show the sustainability of gains, which was helpful in providing support of the question being asked.

Meyers et al. (2013) showed that CPT or Prolonged Exposure Therapy was effective in reducing PTSD severity and depressive symptomology between the year before treatment and the year after treatment. Mullen et al. (2014) had similar findings for CPT or Present-Centered Therapy, but with a slightly shorter follow-up period of 6 months after treatment. Finally, Holliday et al. (2014) found significant reductions in negative cognitions among veterans treated with CPT as compared to Present-Centered Therapy, with a follow-up period through 6 months.

Cost-benefit of CPT treatment (1 study)

The last theme the researcher found was cost-benefit; however, it was supported by only one study. This study was scored at a 7, although the study was able to give an aspect to the paper that all other studies were not able to in the area of cost-benefit.

Meyers et al. (2013) investigated the potential cost-benefit of CPT therapy among veterans. The authors suggested that there is considerable individual and economical benefit to promoting CPT treatment among veterans with PTSD – whether they have or do not have a history of MST. In their study, veteran participants' mental health care costs declined significantly from the year before CPT treatment as compared to the year after CPT treatment, \$3216 to \$1860 on average; and total costs decreased from \$5173 to \$3133, a decline of 39%. The number of annual mental health visits among participants also decreased from 23.4 visits per year to 16 visits per year or 32%. These reductions in both cost and utilization suggest that CPT therapy is a sensible investment.

Discussion

All of the 12 articles that were included in the researcher's literature review substantiated that CPT is effective in the treatment of MST-related PTSD and/or military-related PTSD within a veteran sample. However, even with the findings supporting the hypothesis, most of the studies had a small sample sizes and that limits the generalizability of the findings. The vast majority of studies spoke to the need for more studies of larger size.

Implications**Practice /Policy**

For personal learning and professional development, the researcher wanted to find out what are the best practices for treating military sexual trauma victims with PTSD. With more

women enlisting and the fact that women are now able to join the infantry units in any branch of service, there is a fear that the number of MST victims will rise. When the numbers start increasing, future therapists must be prepared for the influx of patients. Women veterans, who consist of 8% of the total veteran population, are utilizing the VA services at a growing rate – from 5.5% to over 10% within the last 5 years. In addition, the number of women utilizing VA services has almost doubled from 160,000 to almost 300,000 within the last 10 years (Walter et al., 2013). The numbers of women veterans are growing at a much higher rate than their male counterparts. As an aspiring social worker, the researcher must be knowledgeable of current therapies and evaluate them. Currently, the United States Department of Veterans Affairs Health Administration promotes the use of many different types of evidence-based practices for treating mental health concerns.

The findings have shown that CPT is effective in treating posttraumatic stress disorder in both male and female victims of military sexual trauma. It has demonstrated its effectiveness in the treatment of PTSD and depression in veterans with military-related PTSD and depression that is not MST specific. It is encouraging that CPT has been found to be effective in studies involving both women and men. It is also heartening that CPT is effective in the treatment of veterans with complex trauma histories, such as MST plus childhood sexual abuse (Walter, Buckley, Simpson, & Chard, 2013), or MST plus co-morbid conditions, such as depression and/or general anxiety (Monson et al., 2006). This influences social workers and therapists to challenge their preconceptions, or set aside their original beliefs, that persons who suffer from complex trauma histories are more “symptomatic” and would benefit less from CPT. The veteran community is a very unique and diverse clientele, and former service members often have complex trauma histories and a myriad of mental health conditions. CPT is a practical and

effective choice of treatment.

The Veterans Administration in 1999 initiated a mandatory sexual trauma screening for all incoming veterans and “provision of sexual trauma services was made a permanent benefit in 2004 via Public Law 108-422” (Suris, Link-Malcolm, Chard, Ahn, & North, 2013). In response to the growing number of veterans who have been diagnosed with PTSD, the Department of Veterans Affairs Health Administration established the policy that all veterans who have been diagnosed with PTSD have access to CPT or Prolonged Exposure Therapy. The Department also implemented a “nationwide dissemination initiative to ensure access to Prolonged Exposure Therapy and CPT at every facility” (Meyers, Strom, Leskela, Thuras, Kehle-Forbes, & Curry, 2013).

This a great start to post-vention treatment for veterans; however, there should be a policy that is implemented to protect our active duty military by the Department of Defense. The way it currently stands according to Code Title 10, Subtitle A, Part II, Chapter 47 of the UCMJ (Uniform Code of Military Justice), which are the laws, rules and regulations that the military follows; the UCMJ defines what sexual misconduct is and outlines all directives related to prevention and response efforts. The reporting of a sexual assault, as it stands today, involves members of the chains of command for both the reporting party and the accused. The current way of reporting is restricted and unrestricted reports. Restricted reporting means the victim reports the assault to a sexual assault response coordinator (SARC), victim advocate (UVA), chaplain, and/or health care provider (HCP). When a victim reports this way it will not trigger an investigation and the victim remains anonymous. Victims may report this way because they fear they will be reprimanded, bullied, or ostracized from people in the command, but they still

want to have access to services. The command is notified that a sexual assault happened, but they do not know whom the victim is and there is no punishment for the offender.

Unrestricted reporting is when a victim makes a report and the immediate commander of the perpetrator is notified and ordered to investigate the accusations. After the investigation is complete the commander has the authority to do nothing, move to administrative proceedings, punish the perpetrator outside the conduct of a courts-martial, or hand it off to a higher authority to have them make a decision regarding potential adjudication.

It is widely believed by advocates for MST that the power should be taken away from the commanding officers with regard to who is knowledgeable of the sexual trauma incident because the commanding officer may be the perpetrator. Victim blaming and shaming is prevalent in the military, which is why so many sexual harassment, assaults and rape go unreported. If there was a new policy that made it so that the victims could go to the civilian police for report and investigation outside of the military, victims may feel more comfortable with reporting. They may also feel as though they will receive justice or a fair trial if it is taken out of the military's jurisdiction. If that cannot be done then a sexual assault response coordinator (SARC) or victim advocate (UVA) should be a part of the investigation and be able to speak up for the victim.

Research

Much of the previous research has been on the effectiveness CPT in civilian contexts, but not distinctively investigating effectiveness in MST samples. Although the findings of this literature review support the effectiveness of CPT in the treatment of MST, more research needs to specifically focus on this how effective as compared to other therapies. The only way to accomplish this is by getting larger sample sizes. Many of the studies did not reach sufficient sample size to test the effectiveness of CPT versus Present-Centered Therapy or the effectiveness

of CPT versus Prolonged Exposure Therapy. The sample sizes in all the studies were also far too low to be able to generalize the effectiveness to the whole military population. Future research may seek to expand the universality of CPT treatment for veterans by comparing outcomes across groups that have diverse socio-demographic characteristics and existing health conditions.

Another limitation cited by many of the studies was the lack of long-term follow-up. Most studies measured changes between pre-treatment and immediate post-treatment. Long-term follow-up would help establish whether the outcomes of CPT can be sustained. For example, a longitudinal study with a large sample size of more than 400 veterans could be used to investigate if veteran participants have a relapse in PTSD symptoms at intervals of 6 months to a year of follow-up.

Another important aspect that should be investigated is reasons participants drop out of studies. Length of treatment or number of sessions could be looked at, in addition to time of day available for scheduled appointments or recommended recurrence of appointments. In order to prepare for the influx of patients who experience trauma-related PTSD, future research should focus on addressing retention.

We as clinical social workers should research ways to prevent MST from happening, and ways to prevent rapes in both civilian and military cultures. If that is not possible, then research will need to continue to focus on resiliency factors and post-vention treatments. With the many men and women who have experienced MST were not diagnosed with PTSD or experiencing other mental health conditions, looking at their coping mechanisms and resiliency will be key. Looking at what is unique and about their ability to recover from the trauma they experienced, and go on to live a healthy and “normal” life. A qualitative research study using semi-structured interviews with veterans could be the best way to address this.

One final aspect of research that could be addressed is recruiting men to participate in studies. Military sexual trauma rates are reported at a lower level for males as compared to females, but the “actual number of positive screens is similar between the genders due to the disproportionate ratio of male to female veterans” (Suris et al., 2013). Mullen et al. (2013) showed that all of the males in their study benefited and tolerated CPT treatment. However, there were only 11 male participants, which is not enough to be able to generalize that men can tolerate CPT treatment. In order for more research to be done, the Veterans Affairs Health Administration needs to do a better job with recruiting men to participate in the studies.

Conclusion

CPT is a very promising avenue for the treatment of MST-related PTSD and military-related PTSD among veterans. It has demonstrated effectiveness among female and male veterans, as well as veterans with complex trauma histories and co-morbid conditions. However, research must be done with larger sample sizes to allow us to answer the question, “Is CPT more effective than other treatments such as; Prolonged Exposure Therapy or Present-Centered Therapy?” Future research can also help us firmly understand whether the outcomes of CPT treatment are sustainable through 6 months to 1 year after treatment. Finally, we can use the successes of CPT in the veteran population to introduce policy changes that advocate the use of CPT as treatment in the active duty military.

References

- Ballenger-Browning, K., & Johnson, D., (2010). Key facts on resilience. *Naval Center for Combat & Operational Stress Control*. Retrieved from:
<http://www.med.navy.mil/sites/nmcsc/nccosc/healthProfessionalsV2/reports/Documents/resilienceTWPFormatted2.pdf>
- Boyd, M., Bradshaw, W., & Robinson, M. (2013). Mental health issues of women deployed to Iraq and Afghanistan. *Archives of Psychiatric Nursing*, 27, 10-22. DOI:
<http://dx.doi.org/10.1016/j.apnu.2012.10.005>
- David, W., Simpson, T., & Cotton, A. (2006). Taking charge a pilot curriculum of self-defense and personal safety training for female veterans with PTSD because of military sexual trauma. *Journal of Interpersonal Violence*, 21(4), 555- 565. DOI:
10.1177/0886260505285723
- Department Of Defense Sexual Assault Prevention and Response. (2012). Department of Defense annual report on sexual assault in the military vol 1. Retrieved From:
http://www.sapr.mil/public/docs/reports/FY12_DoD_SAPRO_Annual_Report_on_Sexual_Assault-volume_one.pdf
- Department Of Defense Sexual Assault Prevention and Response. (2014). Department of Defense annual report on sexual assault in the military. Retrieved From:
http://sapr.mil/public/docs/reports/FY14_Annual/FY14_DoD_SAPRO_Annual_Report_on_Sexual_Assault.pdf
- EMDRIA EMDR International Association. (2014). EMDRIA international association creating global, healing, and hope. Retrieved From: <https://emdria.site-ym.com/?120>
- EMDR Institute. (2015). What is EMDR?. Retrieved From: <http://www.emdr.com/what-is-emdr/>

- Ferdinand, L., Kelly, U., Skleton, K., Stephens, K., & Bradley, B. (2011). An evolving integrative treatment program for military sexual trauma (MST) and one veteran's experience. *Issues in Mental Health Nursing*, 32, 552-559. DOI: 10.3109/01612840.2011.582228
- Holliday, R., Williams, R., Bird, J., Mullen, K., & Suris, A. (2015). The role of cognitive processing therapy in improving psychosocial functioning, health, and quality of life in veterans with military sexual trauma-related posttraumatic stress disorder. *Psychological Services*, 12, 428-434. <http://dx.doi.org/10.1037/ser0000058>
- Holliday, R., Link-Malcom, J., Morris, E., & Suris, A. (2014). Effects of cognitive processing therapy on PTSD-related negative cognitions in veterans with military sexual trauma. *Military Medicine*, 179, 1077-1082. DOI:10.7205/MILMED-D-1300309
- Hoyt, T., Rielage, J., & Williams, L. (2012). Military sexual trauma in men: exploring treatment principles. *Traumatology*, 18(3), 29-40. DOI:10.1177/1534765611430724
- Katz, L., Bloor, L., Cojucar, G., Draper, T. (2007). Women who served in Iraq seeking mental health services: relationships between military sexual trauma, symptoms, and readjustment. *Psychological Services*, 4, 239-249. DOI: 10.1037/1541-1559.4.4.239
- Kelly, U., Skelton, K., Patel, M., Bradely, B. (2011). More than military sexual trauma: Interpersonal violence, PTSD, and mental health in women veterans. *Research in Nursing Health*, 34 457-467. DOI: 10.1002/nur.20453
- Landes, S., Garovoy, N., & Burkman, K. (2013). Treating complex trauma among veterans: three stage-based treatment models. *Journal of Clinical Psychology: In Session*, 69(5), 523-533. DOI: 10.1002/jclp.21988

Lee, E. (2014). Suicide rate among young veterans has tripled, report finds. *Think Progress*.

Retrieved From: <http://thinkprogress.org/health/2014/01/11/3150531/young-male-veterans-more-likely-/>

Mattocks, K., Haskell, S., Krebs, E., Justice, A., Yano, E., Brandt, C. (2012). Women At War: understanding how women veterans cope with combat and military sexual trauma.

Social Science & Medicine, 74, 537-545. DOI: 10.1016/j.socscimed.2011.10.039.

Meyers, L., Strom, T., Leskela, J., Thuras, P., Kehle-Forbes, S., & Curry, K. (2013). Service utilization following participation in cognitive processing therapy or prolonged exposure therapy for post-traumatic stress disorder. *Military Medicine*, 178. DOI:

10.7205/MILMED-D-12-00302

Monson, C., Schnurr, P., Resick, P., Friedman, M., Young-Xu, Y., & Stevens, S. (2006).

Cognitive processing therapy for veterans with military-related posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology*, 74(5), 898-907. DOI:

10.1037/0022-006X.74.5.898

Mullen, K., Holliday, R., Morris, E., Raja, A., & Suris, A., (2014). Cognitive processing therapy for male veterans with military sexual trauma-related posttraumatic stress disorder.

Journal of Anxiety Disorders, 28, 761-764.

<http://dx.doi.org/10.1016/j.janxdis.2014.09.004>

Northcut, T., & Kienow, A. (2014). The trauma trifecta of military sexual trauma: a case study illustrating the integration of mind and body in clinical work with survivors of MST.

Clinical Social Work J, 42, 247-259. DOI: 10.1007/s10615-0140479-0

Palmer, C. (2008). A theory of risk and resilience factors in the military families. *Military*

Psychology, 20(3), 205-217. DOI: 10.1080/08995600802118858

- Rauch, S., Defever, E., Favorite, T., Duroe, A., Garrity, C., Martis, B., & Liberzon, I. (2009). Prolonged exposure for PTSD in veteran health administration PTSD clinic. *Journal of Traumatic Stress, 22*(1), 60-64. DOI:10.1002/jts.20380
- Schnurr, P., Chard, K., Ruzek, J., Chow, B., Shih, M., Resick, P., Foa, E., Marx, B., Huang, G., Lu, Y. (2015). Design of VA cooperative study #591: cerv-ptsd, comparative effectiveness research in veterans with PTSD. *Contemporary Clinical Trials, 41*, 75-84. <http://dx.doi.org/10.1016/j.cct.2014.11.017>
- Schumm, J., Dickstein, B., Walter, K., Owens, G., & Chard, K. (2015). Changes in posttraumatic cognitions predict changes in posttraumatic stress disorder symptoms during cognitive processing therapy. *Journal of Consulting and Clinical Psychology*. <http://dx.doi.org/10.1037/ccp0000040>
- Street, A., Voght, D., & Dutra, L. (2009). A new generation of women veterans: Stressors faced by women deployed to Iraq and Afghanistan. *Clinical Psychology Review, 29*, 685-694. DOI: 10.1016/j.cpr.2009.08.007
- Suris, A., Link-Malcolm, J., Chard, K., Ahn, C., & North, C. (2013). A randomized clinical trial of cognitive processing therapy for veterans with PTSD related to military sexual trauma. *Journal of Traumatic Science, 26*, 28-37. DOI: 10.1002/jts.21765
- Tiet, Q., Leyva, Y., Blau, K., Turchik, J., & Rosen, C. (2015). Military sexual assault, gender, and PTSD treatment outcomes of U.S. veterans. *Journal of Traumatic Stress, 28*, 92-101. DOI: 10.1002/jts.21992
- U.S. Department of Veterans Affairs (2015). PTSD: national center for PTSD. Cognitive processing therapy. Retrieved From: http://www.ptsd.va.gov/public/treatment/therapy-med/cognitive_processing_therapy.asp

- Voelkel, E., Pukay-Martin, N., Walter, K., & Chard, K. (2015). Effectiveness of cognitive processing therapy for male and female U.S. veterans with and without military sexual trauma. *Journal of Traumatic Stress, 28*, 174-182. DOI:10.1002/jts.22006
- Walter, K., Buckley, A., Simpson, J., & Chard, K. (2013). Residential PTSD treatment for female veterans with military sexual trauma: does a history of childhood abuse influence outcome? *Journal of Interpersonal Violence, 29*(6), 971-986. DOI: 10.1177/0886260513506055
- Williams, I., Bernstein, K. (2011). Military sexual trauma among U.S. female veterans. *Archives of Psychiatric Nursing, 25*, 138-147. DOI:10.1016/j.apnu.2010.07.003
- Zappert, L., & Westrup, D. (2008). Cognitive processing therapy for posttraumatic stress disorder in residential treatment setting. *Psychotherapy Theory, Research, Practice, Training, 45*(3), 361-376. DOI: 10.1037/0033-3204.45.3.361
- Zimmerman, M. (2013). Resiliency theory: a strengths- based approach to research and practice for adolescent health. *Health Education & Behavior, 40*(4), 381-383. DOI: 10.1177/1090198113493782